

Initiative Towards sustainable Kerosene for Aviation



Alternative Fuels for Aviation

CAAFI – CORE-JetFuel Cooperation Workshop

Inmaculada Gomez (SENASA) – Alexandria 27th April 2016



Results

1.- PRODUCTION

Feedstock

4 camelina plantations in Spain + 1 in Romania

- Selected and new camelina **varieties adapted** for Europe and with increased **oil content**
- Optimized camelina **growing protocols**

new techniques for pre-processing **UCO** → pyrolysis study



Conversion technology

- **Improved refining facilities** (better adapted to biojet requirements)
- adapted **protocol** for in house **quality testing**.



4. Results

2.- LOGISTICS and LARGE SCALE USE:

Logistics

- **Fuel infrastructure:** (ref-FF, FF & FF-AC) **different systems**, ownership and operators. Biofuels storage, blending & delivery: **location for blending**
- **1st worldwide use of biojet on OSL hydrant system.** Normal use.
- **Blending accountability:** to be tracked based on chain of custody documentation on **mass-balance basis**





4. Results

2.- LOGISTICS and LARGE SCALE USE:

Engine and fuel systems testing

- ✓ **18 flights** AMS-AUA-BON [A330-200]: no detrimental effects on operation, similar or slightly better fuel consumption
- ✓ APU tests for **pollutant emissions**: reduction in fuel flow, reduction in the SAE smoke number and possible reduction in PMs. No changes NOx or UHC.
- ✓ Up to **80 flights** OSL-AMS [E190] with biojet: flight series has just started, results to come soon





4. Results

3.- SUSTAINABILITY ASSESSMENT:



- **GHG savings** estimated to achieve 60%, RSB certification for the CCE camelina oil plantations
- **Low ILUC risk assessment framework:** fallow land rotation, no demand of additional land or substitution of crops
- Several **sustainability checks**



4.- OUTREACH:



ITAKA works to build-up a strong partnership to **contribute to a worldwide effort.**

Detailed project results are available at www.itaka-project.eu



Partners



	SENASA Project Coordinator
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	Airbus Group
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	Camelina Company España (CCE)
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	Consorzio per la Ricerca e la Dimostrazione Sulle Energie Rinnovabili (RE-CORD)
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	EMBRAER
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	Neste
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	Asociația Centrul de Biotehnologii Microbiene BIOTEHGEN
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	Compañía Logística de Hidrocarburos S.A. (CLH)
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	École Polytechnique Fédérale de Lausanne (EPFL)
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	Manchester Metropolitan University (MMU)
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	SkyNRG
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✓ demonstrate the readiness of SPK large-scale production & use





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www.itaka-project.eu

Final ITAKA workshop
13-14 September
Madrid



Biojet in Europe: The way forward

The screenshot shows the ITAKA website homepage with the following content:

- Navigation:** Home, About ITAKA, Partners, Dissemination, Progress & Results, News & Events, FAQs.
- Main Header:** Itaka logo and the tagline "Initiative Towards sustainable Kerosene for Aviation".
- ITAKA provides sustainable fuel for KLM flights at Oslo Airport:**

KLM Royal Dutch Airlines has launched a series of around 80 biofuel flights from Oslo to Amsterdam operated with an EMBRAER 190. Biofuel has to be supplied by fuel trucks for these flights in order to measure the efficiency of biofuel in comparison with kerosene during the Embraer flights. The biofuel for these series of flights is produced from 100% RSB (Roundtable on Sustainable Biomaterials) certified camelina oil and in full compliance with the EU RED standard. It is produced within the ITAKA project and supplied by Air BP and SkyNRG.
- Public consultation:**

The EC is carrying out a new public consultation related to the preparation of a sustainable bioenergy policy for the period after 2020. The consultation period to submit your contributions is 10 February to 10 May 2016. The objective of this survey is to consult stakeholders and citizens on an updated EU policy on sustainable bioenergy for the period 2020-2030. You are invited to submit your response.
- Latest News:**
 - 3 Apr: **Cruising Altitude** - KLM Cityhopper launches Amsterdam-Oslo biofuel flights
 - 2 Apr: **Tourexpi** - International KLM trials biofuel-powered flights
 - 1 Apr: **Airsec** - KLM trials biofuel-powered flights
- Itaka has been the first at:**

FLYING IN AN AIRBUS A330-200 USING BIOJET

Leader in Biofuel

HAVING MORE DATA ON BIOFUEL PERFORMANCE DURING LONG HAULFLIGHTS, TO IMPROVE SYNERGIES BETWEEN BIOFUEL AND AIRCRAFT
- Camelina oil production:**

A 4th camelina oil plantation is currently growing in Spain to complement the highly valuable information made already available from the project in the previous plantations. Information gathered about the crop in the European Union focus on improve social, economic and environmental performance of the crop.

This plantations in Spain are complemented with smaller plantations in Romania to consider different climate and socioeconomic conditions.
- Site Map | Contact | Private Area**
- Footer:** This project has received funding from the European Union's Seventh Framework Programme for research technological development and demonstration under grant agreement No 308807.

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